

# Virginia Wildlife

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# Virginia Wildlife

*A Monthly Magazine Dedicated to the  
Conservation, Restoration, and Wise Use of  
Virginia's Wildlife and Related Natural Resources,  
and to the Betterment of Hunting, Fishing and  
Outdoor Recreation in Virginia*

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## JANUARY

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**COVER:** Virginia may be a part of the South, but the residents of the Roanoke Valley in Roanoke and Montgomery counties sometimes feel like they live in Alaska. Several snow storms bury this valley each year and it is several days before they dig out. Pictured here is one of last year's snows photographed by George H. Harrison.

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## Cork, Quail and Our Age of Science

IT was a gorgeous moonlit night over the Atlantic, and the giant, transcontinental jetliner was pulling away from the Azores at 596 miles per hour. Altitude was 40,000 feet; outside temperature, 44° below zero.

Inside the giant economy compartment people talked. There was no thundering roar from the engines, only a steady, low, hissing noise, like the falls of Niagara in the distance.

The man next to me was talking about our respective businesses.

"So you're in wildlife. How nice. Tell me, how does the future look for your business? I mean . . . is there a place for it in this new world? This jet age?"

It was a good question and I hesitated for a moment.

"Well, it's like your cork business," I finally said. "You say the cork oak forests of Portugal have been producing cork bark under good management for centuries and the supply and quality of cork is still as good as ever. Well, perhaps we can do the same with our wildlife resources—if we really follow similar principles."

During the ensuing four hours we talked about cork management and utilization and wildlife management and conservation and it was surprising how much the two businesses had in common.

Today, as one sees jetliners streaking across the heavens, sees science and technology moving ahead into a bold new future, some people are beginning to wonder if there is really any place for wildlife in our new age of science. Can the future do without wildlife? Is it necessary that we strive to hold onto our wildlife populations when it is the *human* population that we must provide for? Furthermore, is wildlife conservation necessary—and if necessary, for whom?

These are sobering questions, and they deserve some sobering thought. Is wildlife necessary in our new age of science?

Well, we humbly submit—as we said to our cork importer—we think there is a place for wildlife in our world of tomorrow. First, it seems logical to say that we want wildlife in America because it affords a much needed form of recreation for millions of our citizens, because it provides a very substantial economic return to the country, because it has certain biological values in our complex natural world of checks and balances, and, finally, because it is a valuable American heritage and an expression of a national house in good order. Wildlife, history and geography show, flourishes where man has succeeded in adapting himself to the land where he lives and where he is attuned to a degree of bountiful living. Wild birds and mammals are not abundant where man and the land are not in harmony, such as we saw in Greece, Jordan, and Israel—situations where man must use the land so intensively that he must extract every last parcel from it.

No. The conservation of our future wildlife is no luxury. Far from it. It is a necessity. It is no more a "take it or leave it" resource than is our soil a "take it or leave it" proposition. We might do without topsoil, sure, but only as we are willing to accept a lower standard of living as a result of it. We can do with less pure water, forests and parks but only as we are willing to play cards with a precarious future. We might do with less wild geese and quail in the new age of science, but only as we are willing to be a poorer people without them. The pleasures associated with hunting and fishing, the economic return from pastimes associated with the wildlife harvest, the esthetic and spiritual enjoyment that wild creatures supply those who neither kill nor profit financially—all these are traditional legacies in America. Yet none of these things, in itself, convinces us of the value and place of wild animals and birds as does the rather stark realization that a world without wild creatures would be no world at all.—J. J. S.

### Disapproves of "Slaughter" of Deer

I READ an article in my November issue of *VIRGINIA WILDLIFE* on page 21 and, if I may, I would like to voice my opinion on deer hunting, sportswise, but not as Marion Packett did. First off, let me explain that I am 29 and was raised in Pennsylvania.

To have 12 or 13 dogs chase a little or big deer is not sportsmanship, it is gang slaughter, for the deer has no real advantage. A deer run by dogs has stronger meat when killed, I believe, and a deer shot with a shotgun using buckshot suffers if it is not killed on the first shot. I believe that a real sportsman will stalk or still hunt his deer to give it an equal or better advantage.

I use a high-powered rifle or I don't hunt, and when I hit my deer, if it is in the right place, he is relaxed to a certain extent and doesn't suffer, and I don't ruin any meat.

I have hunted most every way in Virginia, North Carolina, Pennsylvania, and Alaska, and I truly believe that my way is the real sportsman's way.

Walter L. Brownlee  
Scottsville, Virginia

### "Cease Fire" Called For

THE November issue of *VIRGINIA WILDLIFE* came today and I have just read the first article, "Must Wildlife Esthetic Values Lose Out to 'Merchandising'?" by Ernest F. Swift. Mr. Swift described man's progress from the "more than two centuries of fur traffic, bloody butchery, market hunting and the scorched-earth policy" to the present conservation program.

Those early crusaders working for the preservation of wildlife were ridiculed unmercifully. But finally, after countless years of consecrated effort, the thinking of men progressed a notch higher and regulations were passed in an attempt to prevent positive extinction of any species not considered competitive predators. This new program called for stocking areas, both field and stream, and allowing so many days a season for hunting various species. In other words, it wasn't really done for love of esthetic wildlife, but this manipulation served to provide some continuance of living targets to satisfy man's lust for killing.

Today, those dedicated to the defense of wildlife, those who view the wonders of nature and prefer to be participants with the natural world and keep inviolate the rights and freedom of every living creature, are scoffed, condemned, shouted down or silenced. Just as surely as some hunters even now applaud the present game management program, the steady progress of higher human standards will bring about a "cease firing" demand.

Mary Frances Morrisette  
Norfolk, Virginia

# Conservation is Everybody's Business

By CLARENCE COTTAM, *Director, Welder Wildlife Foundation  
Sinton, Texas*

**G**REAT leaders of all ages and of all peoples have recognized the importance of our natural resources. An ancient Persian proverb reads: "God will not seek thy race nor will He ask thy birth. Alone He will demand of thee. 'What hast thou done with the land (and water) that I gave thee?'" In the infancy of our Republic, I believe it was Patrick Henry who expressed the thought that the greatest patriot was he who takes the best care of the land. Washington, Jefferson and Tom Paine made similar expressions.

More than a half century ago, one of our greatest conservation presidents, Theodore Roosevelt, before the first Governor's conference which he called, said, "Facts which I cannot gainsay force me to believe that the conservation of our natural resources is the most weighty question now before the people of the United States. If this is so, the proposed conference, which is the first of its kind, will be among the most important gatherings in our history in its effect upon the welfare of our people."

The philosophy that we have a moral obligation to conserve and wisely use our God-given resources is as fundamental to the preservation of our society today as it was in earlier times. History confirms the social wickedness of passing on to unborn generations a land and its resources impaired, wasted and tax ridden by selfish or thoughtless exploitation.

## Conservation or National Decay

We must ever remember that America's natural resources constitute the real basis of her wealth, power and future greatness. Progress, security, greatness and world leadership are quite unlikely without them. If history repeats itself we can expect that our democratic ideals with their high moral and spiritual value will be dangerously weakened if we let our resources become squandered and sold on the altar of political expediency. Read, if you will, the history of Babylon, Ur of Chaldees, the land of Canaan, Carthage, Phoenecia, ancient Rome and Greece and modern China. The need for more resources has been an underlying cause of most world conflicts.

May I be excused for referring to a past impressive experience. As soon as he arrived home from the "Big Four" Conference at Tcheran, President Roosevelt called a conference of his cabinet to give them a report. That very afternoon following the cabinet meeting, Secretary Harold Ickes of Interior in turn called together all of his Bureau Chiefs and Assistant Chiefs and told them he wanted to report the most important event of that historic conference. It seemed that for some two weeks or longer the "Big Four" leaders and their aides had worked long hours continuously until they realized they must take a day off for rest and relaxation. Our President elected to visit some excavations in an adjacent and desolate desert area of shifting sands. Here some 20 feet or more deep were the butts of mighty oaks and pines and evidence was clear that in ages past there had been a bubbling brook and a fruitful valley of happy and prosperous people. Through thoughtless exploitation and lack of conservation the

land and water and their attendant resources had been destroyed. Poverty and destruction of the civilization were then inevitable.

Our first bulwark against the curse of Communism and our defense against a foreign foe is not based on our conquering the Moon or Mars, but on our learning to live in harmony with mother nature on this mundane sphere on which we find ourselves.

In my opinion we will help the free world and underdeveloped peoples best if we remain strong and solvent from the standpoint of our economy and resource base. Of course, it is good and proper to help build dams in India and south-east Asia and help clean up the polluted Ganges, yet it is no less a Christian virtue or a national and world benefit for us to conserve our own soil and forests, remove pollution from our own streams, including the Potomac and the Upper Mississippi, and practice sustained yield of our forests, wildlife and fishery resources in our own beloved country. Patriotism, like charity, morality and good Christian ethics should start at home. Yes, we need sound conservation practiced here and now in America. It is basic to our progress, our survival and our future.

Sound conservation, which implies wise use on a sustained yield basis is essential for maintaining national solvency. To quote our beloved Ding Darling again, one of our greatest conservation thinkers and leaders of a decade ago, "Conservation is not just a sentimental hobby, nor a fanciful hope of idle dreamers, of duck hunters, of fishermen, or bird lovers. It is a science whose principles are written in the oldest legal code in the world—the Laws of Nature. Failure to obey will lead to national disaster." This nation, of which we are all proud to be a part, needs another John the Baptist to preach the Gospel of Conservation to every hamlet, village and city in our beloved land. Conservation repentance on a national level is called for.

Our current explosive population increase shows the necessity for conservation. In 1880 we were a nation of 50 million. By 1900 it was 76 million. Today there are in excess of 178 million Americans and in less than 40 years hence we may expect a national population in excess of 300 million. With perhaps six to seven percent of the world's population and land area, the United States is consuming approximately one-half the world's annual production of raw materials, excluding foods. Do we need better proof that we had better practice conservation of all of our resources.

## Wildlife and Recreation Values

America's favored recreation is fishing and hunting and this is big business. Last year some 62 million Americans visited national parks while 59 million and 10 million, respectively, visited national forests and federally operated wildlife refuges. Some 280 million visits to state parks were recorded. Wildlife refuges, parks, forests and recreational areas are in great demand.

Last year our 33 wild whooping cranes that winter on and in the vicinity of the Aransas National Wildlife Refuge of

Condensed from an address before The State Wildlife Federation, Park Rapids, Minnesota, August 29, 1960.

South Texas brought about a \$1 million tourist trade into that section of the state. The great army of bird watchers, which is rapidly increasing, adds much to the tourist trade of many states. A two-day bird hike, that was conducted in South Texas, brought in some \$20,000 or more to the host community and other sections of the state through which the bird watchers traveled.

Let us not underrate the value of our outdoor resources, esthetically, socially and economically. Many cities without adequate recreational facilities have learned that the mental and physical health of their people requires some diversion from the steel and stone of city life. Consequently, additional city parks and wildlife areas have recently been developed within the confines of these great cities. A few years ago I was invited to help find and outline a plan of development of a wildlife refuge and recreation area for New York City. Since then much has been expended in developing this and from reports it is proving eminently successful. It is a profligate society that doesn't look to the future. We must conserve and wisely use these God-given resources with which America has been blessed above all other lands. The time to act is now and before it is too late.

### Water and Wetland Resources

Water is the lifeblood of our nation. Wise water management that will afford protection from excess water or from too little water is necessary. When President Eisenhower established his "Presidential Advisory Committee on Water" in 1954, he said, "... if we are to continue to advance agriculturally and industrially, we must make the best use of every drop of water which falls on our soil or which can be extracted from the oceans."

Certainly there are times when drainage is a necessity. The record indicates, however, that in the Prairie Pothole Region of the Dakotas and southwest Minnesota, too frequently administrative decisions for drainage have been based on factors other than sound land use needs or broad public interest. In areas where water is in short supply, as is frequently the case

in our Prairie belt, the conservation of that indispensable resource (water) is both a personal and public responsibility.

I would have difficulty opposing the right of a private property owner or farmer to drain any or all of his own land, unless such action adversely affected his neighbors or society generally. The matter of subsidizing drainage out of the federal treasury, however, is a vastly different proposition. Subsidized drainage in the Prairie Region was introduced by the U. S. Department of Agriculture in 1943 for the purpose of stimulating agricultural production to aid the war effort. It was needed at that time. Though the need has long since passed, this practice still is encouraged despite the present mountain of surpluses which tend to depress our farm economy.

As of April 30, 1959, our Commodity Credit Corporation, the price support arm of the government buying up farm surpluses, reported they were spending nearly \$9 billion on this price support program. At that time they had on hand 1,084,090,690 bushels of wheat in storage and this before the beginning of another harvest!

I don't believe it is in the public interest for a paternalistic governmental bureaucracy to encourage farmers to drain their potholes and marshes to raise more grain for an already glutted market for which the same government is spending billions of taxpayers' dollars for price support, for storage and for the pyramiding of surpluses we neither want nor need.

Administrators of the Department and some others who profit from the drainage program piously assure the public that the program is bringing no new land into production. With considerable effort a group of conservationists, late in 1956, were able to obtain a conference and discuss this problem with the Secretary of Agriculture. As a result of facts presented, representatives of both Departments of Agriculture and Interior, conducted a joint investigation of the drainage program in sample areas of the Pothole Region which they chose. They found that 13.4% of the number of individual wetlands in the samples jointly examined during this inspection trip were drained in violation of Department policy. Furthermore, the inspectors found that technical and financial assistance were provided in draining 48.1% of the acreage involved in violation of the stated policy of not bringing additional land into production. The wildlife people felt that no attention had been paid to the stated and publicized policy of giving due consideration to wildlife by those persons in the Department of Agriculture who pass on applications for drainage. Despite the facts that were uncovered, the Assistant Secretary of Agriculture stated they could not cease giving payments for drainage work in this area and that their investigations (presumably the joint investigations by Agriculture and Interior) had found only minor deviations from the Agricultural Department policy and those situations would be improved through regular administrative procedure!

Despite administrative policy statements, reports and facts continue to show that practices in the Pothole Region have changed little. Is bureaucracy becoming too large and powerful? Is our democracy unable or unwilling to cope with situations like this? It is a stupid head that can't figure out a reason for not doing what it wants to do regardless of facts, promises or moral obligation!

Despite protests from Interior and urgent appeals from the wildlife fraternity throughout the land, drainage with Agricultural encouragement, support and subsidy is *increasing*. In 22 counties in Minnesota there were 34,187 acres drained in

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"Let us not underrate the value of our outdoor resources. Many cities without adequate recreational facilities have learned that the mental and physical health of their people requires some diversion from the steel and stone of city life."

# The Management of Upland Game on Public Lands in Virginia

By JAMES E. THORNTON

*Supervising Game Biologist*

Commission Photos by Cutler

TODAY the population of the United States stands at about 180,000,000 people. It doesn't take a genius to predict that this figure will continue to rise for some time to come, with a predicted population of around 332 million individuals by year 2000. In 1955 the U. S. Fish and Wildlife Service estimated that, of the persons 12 years of age and over in the United States, 18 percent went fishing and 10 percent went hunting. Thirty-five percent of all the households in the United States had one or more fisherman or hunter in the family. By 1980 it is estimated that 68 million people will spend more than a billion man-days for the purpose of outdoor recreation, including hunting and fishing. License sales increase in Virginia follows this trend of population increase. Hunting and fishing license sales covering a period from 1949 to 1959 shows a 55 percent increase in resident hunting licenses, a 145 percent increase in the county combination hunting and fishing licenses, and a 76 percent increase in the sale of national forest stamps.

It is only reasonable to assume, in the face of increasing populations and a corresponding increase in the demand for outdoor recreation, that it will become increasingly difficult to find places to hunt and fish. With an increasing population and an increasing demand for public hunting and fishing areas on the one hand and a constantly shrinking wildlife habitat on the other, the problem will become increasingly acute.

To get some ideas as to what other states in the Southeast are doing in this field, a short questionnaire was sent to all of the states in this area. In the Southeast there are 8,735,646 acres of national-forest land, 776,849 acres of state-forest land, 816,061 acres of game commission-owned lands, 3,258,013 acres of private land which is managed under cooperative agreements with the state game departments, and 2,352,243 acres of other lands, including land belonging to the U. S. Army, Navy and Air Force, U. S. Corps of Engineers, TVA, Flood Control Districts, and other public agencies. This is a grand total of 15,938,812 acres open to public hunting in the Southeast. It may be that we are not as bad off in this field as we once thought we were.

The first big step in managing land for public hunting was taken in 1938 when the Virginia Game Commission and the U. S. Forest Service entered into a cooperative agreement to jointly manage the wildlife on the 1,500,000 acres of national-forest land within the state. The wildlife management phase of the program is supervised directly by the Commission's game and fish biologists, the Forest Service retaining control through approval of development plans in advance. The work is financed through the sale of national forest stamps, Pittman-Robertson funds, and funds derived from the sale of hunting licenses. The only requirement to hunt, fish, or trap in the national-forest land in Virginia is that the individual have a national forest stamp and an appropriate hunting or fishing license.

Game management practices on the Virginia national forests include the creation of wildlife clearings and the seeding of same to small grain, clovers and grasses, the building of water holes, restoration of existing clearings, old home sites and other openings in the forest canopy through mowing, brushing and selective use of herbicides. The construction and maintenance of hunter access and work access roads and trails are also important management tools since it is through such access ways that the distribution of hunting pressure is accomplished. The acquisition and development of rights-of-way to national-forest lands is another activity of increasing importance and has placed much forest land in reach of the average hunter.

Our only experience in controlling hunting pressure on the national forest was in 1951. At that time the Big Levels Federal Game Refuge, in the George Washington National Forest, had reached the point where the deer herd was getting out of hand. Public opinion in general was against opening the area to any form of hunting, but crop damage around the edge of the refuge was excessive and action was demanded. The area was thus opened to deer hunting on a permit basis. The area was open for five days, antlerless deer being legal for the first three days. An attempt was made to limit the kill of antlerless deer to 150. Actually, 85 antlerless deer were killed, of a total of 120 of both sexes. A quota of 650 permits was issued, with a limit of 125 hunters per day. Hunters were selected on a lot basis, 60 percent of the permits being reserved for residents of the county with 40 percent for state and non-resident hunters. Hunters were required to check in and out of the area each day. The administrative problems connected with the hunts were enormous, and the end result was that there were more unhappy than happy people. The following year the permit system was dropped and a specific number of hunters were permitted to hunt the area each day on a first-come, first-served basis. This obviously was not the answer. The next year the gates were thrown open and all comers admitted. Hunting pressure dropped to near normal after the first day, and today the Big Levels is just another hunting area on the national forest.

In the central Piedmont area of Virginia the Virginia Division of Forestry owns approximately 43,000 acres of land. This area now makes up three state forests—the Prince Edward, the Buckingham-Appomattox, and the Cumberland State Forests. Originally, much of this land was open, having been made up of abandoned farmlands, interspersed with forest land. About 20 years ago the Commission entered into a "co-op agreement" with the Virginia Division of Forestry to manage the wildlife on the area on a cooperative basis. The Commission has between 400 and 500 acres of land under intensive management. Plantings include small grain and clover, Korean lespedeza, annuals and corn. Large tracts are leased to local farmers to assist in keeping more of the area open. Other management practices include mowing, predator control and posting.

Adapted from a paper given before the annual conference of the Southeastern Association of Game and Fish Commissioners in Biloxi, Mississippi, October 26, 1960.



The U. S. Forest Service provides the land, the Virginia Game Commission provides the equipment, and, in some cases, county boards of supervisors provide additional funds for game restoration work on national forest land.



While game management may be of secondary importance on national forest land (such as the Dismal unit), it is the primary consideration on the 63,300 acres owned by the game commission (such as the Gathright area).



Hunting license revenue pays for hunter access trails and camping sites as well as game food and cover plantings on public hunting areas.

Initially, the area was open to public hunting for only one week during the entire season, usually the first week in December. Hunters were required to purchase a \$1 permit to hunt on the area and were required to check in and out of the area each day. There was always a considerable amount of hunting pressure during this week and in order to properly administer the area the services of a large number of personnel—both biologists and wardens—were required.

Within the last few years the Division of Forestry has agreed to permit hunting on the area for the full length of the season and to do away with the requirements to check in and out of the area. The \$1 permit is still a requirement. Since this has been in effect, the hunting pressure has dropped to a point where it is negligible—almost no personnel are required to administer the area during the hunting season. During the past season over 3,000 hunters utilized the area and bagged the largest total of deer and turkey in the history of the forests.

There are certain advantages that go along with the outright ownership of land, the principal one being direct control of the area in all phases of management. All income from the sale of timber or other resources accrues to the owner and the use of the property as a public hunting area is not subject to cancellation on the whims of the owner. Problems, we have found, also come with landownership. One is protection from forest fires. In Virginia, so long as a tract of land is in private ownership, the Division of Forestry will assume full responsibility for fire suppression, including the actual cost of suppression. Once it becomes public property, the cost of fire suppression must be absorbed by the agency responsible for its administration. Boundary location and marking can be a headache, too, as the Commission is obligated to the sportsmen to locate and mark the property boundary on the ground. The condition of the boundary lines of some of the large tracts of mountain land leaves a lot to be desired. From a local point of view, once land is purchased by the Commission, it is lost to the county for tax purposes. The loss of this tax revenue is sometimes quite a blow to some of the small rural counties who already are facing financial difficulties because of decreasing populations.

Timber and other wood products are the largest potential source of income on Commission-owned land. To properly manage this resource is a time-consuming job. Some minor sales have been made, and such sales will increase substantially in the near future. Timber management is on the basis of priority for wildlife values—with revenue being of secondary importance.

As for control of hunting and fishing pressures on Commission-owned lands, the Commission operates on the premise that the less controls the better. What little experience it has had in controlling pressures has indicated that the administrative cost and headaches connected with such attempts at controls are not worth the trouble. Attempts to limit the number of hunters using an area bring more hunters and attach such an attractiveness to the area that it creates artificial pressures. If left to seek its own level, pressures have been above average initially but after the first few days level off to average and in some cases below average.

The only requirement to hunt or fish on any Commission-owned land is the possession of a bona fide hunting or fishing license. One area, namely the Gathright Wildlife Management Area, is closed to turkey hunting at present as surplus wild turkeys are trapped from the area for release in unoccupied turkey range in southwest Virginia. With a few exceptions, the season and bag limits are the same as for the rest of the state. On the areas "west of the Blue Ridge" the seasons and bag limits conform to regulations covering national-forest land. With minor exceptions the possession of a firearm is prohibited both on national-forest land and on Commission-owned land except during the general open hunting season.

The Commission now has approximately 63,300 acres which have been purchased outright for public hunting and

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Commission Photo by Kesteloo

Squirrels will use man-made homes when the weather turns cold.

# WINTER and WILDLIFE

By HENRY H. GRAHAM



Photo by L. F. Addington

Grouse and turkeys roost in hemlocks during heavy snows.

AS OUR party of three strolled quietly along the sun-drenched forest trail in late summer, two chipmunks darted up the face of a large granite boulder, perched themselves on top, and eyed us a bit suspiciously. This incident started me to thinking about the winter months and how wildlife living in these snow-covered mountains would spend them.

What would the birds and animals do to find comfort when the cold winds blew? The chipmunks, of course, would go into early hibernation, retreating to the warmth of their subterranean abodes. Before long now they would be saying goodbye to the world above them and sleep away the winter season.

How about snowshoe rabbits, those beautiful bunnies which are brownish-gray in summer and white in winter? They would shelter themselves from severe storms by remaining under brush piles, emerging in good weather to hop around all winter long. Sometime around the first of November they would begin to change from brownish-gray to white so that when snow blanketed the ground enemies could not see them so easily. This is a wise provision of Nature. The Arctic fox also changes to white in winter and so does the ptarmigan, a kind of northern partridge.

The sly and nimble mink, which is a great rambler and often travels 10 miles or more in a single night, would not hibernate at all. He would seek fish for food while swimming under the thick ice, and just roam the country to his heart's content, the same as during other seasons of the year.

How would the beaver spend the frigid months? He would live in a bank den or a "house" made of sticks and mud. During the summer beavers imbed unbarked tree limbs in the soft bottoms of streams and lakes. In winter they swim under the ice, remove the sticks, and take them to their homes, there to strip the bark from the branches and eat it. Beavers relish bark very much and enjoy making a meal of it. They are vegetarians and never eat fish as so many people mistakenly believe.

What happen to deer, elk, antelope and other big game animals when winter strikes? They work toward the lower elevations where the snow is normally not so deep as in the heights. In sheltered valleys bushes protrude above the shallower snow and wildlife can forage on the shoots, brows-

ing until their stomachs are full. Sometimes, however, when the snow is unusually deep, animals do go hungry, finding the usual food difficult if not impossible to obtain. At such times they occasionally raid isolated haystacks.

Few mammals migrate when winter approaches. Most of them live in the same general area the year around. The vast majority of birds, however, bunch into flocks according to species and head south during the fall. Thrushes, robins, wrens, bluebirds and hundreds of other varieties spend the winter months in warmer climates, returning to their summer habitat the following spring to nest and raise families.

An exception to the rule is the black-capped chickadee. This ornate songster of the high mountains remains in the same territory constantly to cheer many a lonely prospector and woodsman with his dulcet melodies in the severest weather. He does not seem to mind cold and snow. Many a man living in the wilderness has brightened a chickadee's life by throwing from his door pieces of bread and other leftovers to supplement the diet of this beautiful bird. The latter repays the debt by his sweet songs and general friendliness.

Predatory creatures such as cougars, foxes, coyotes, timber wolves and bobcats are out the entire winter. Many hours are devoted to seeking food. All are meat eaters and like rabbits, grouse, partridge, quail and other small creatures which their stealth and cunning enable them to catch.

Grouse prefer to conceal themselves in the thick, protective branches of evergreen trees when storms plague the country. Here they are fairly safe and comfortable. Quail and partridge take refuge in weed thickets and other sheltered places.

What do bears do when winter fastens its icy grip on the countryside? They are snug and cozy, sleeping the winter away in a cave or opening of some sort among the rocks. Going into hibernation during the autumn months, they do not emerge until the gentle breath of spring caresses the terrain. At this time they are ravenously hungry, having partaken of no food during the hibernation period. Sometimes they find a honey tree, which pleases them greatly for all bears have a distinct sweet tooth. Since no berries, another of Mr. Bruin's favorite delicacies, are available at this time of the year, they appease their gnawing hunger by catching birds and smaller animals. When blueberries, serviceberries and other kinds of fruit get ripe, however, bears feast on them. Human berry-



S. C. S. Photo

Side by side, a fox squirrel and a pheasant feast on ears of corn tied to corn stalks. Wildlife feeding can be accomplished easily by leaving a little corn unhusked near good cover.

pickers have sometimes shared the patch with black bears.

Most wild creatures get along fairly well in winter. The fur coats of many animals thicken as a protection against the ravages of the frost king. Those that live underground are warm and cozy, for winter's blasts cannot reach them there. The non-migrating birds take refuge, when necessary, in hollow trees and other protected locations. Ordinarily, wildlife does not fare badly in winter. They take quite good care of themselves, and the coming of spring usually finds them in reasonably good physical condition.

## CONSERVATION IS EVERYBODY'S BUSINESS

(Continued from page 5)

1956, and 57,342 in 1958, while the federal cost in tax dollars was \$143,990 in 1956, and \$368,994 in 1958. More than 40,000 potholes have been drained in North Dakota between 1950 and 1958. The federal share of the drainage cost in its 33 major pothole counties in 1956 was \$124,237; in 1958 it was \$171,002. In South Dakota, 1568 acres were drained in 37 eastern counties in 1956 at a cost of \$13,195. In 1958, 4,213 acres were drained and the federal cost was \$39,071. Because of drought and lowered water tables throughout the region many undrained potholes were dry and were plowed and planted in the summer of 1959.

### Drainage and the Soil Bank

The Soil Bank Act was enacted because Congress found "... production of excessive supplies of agricultural commodities depresses the prices and income of farm families; constitutes improper land use and brings about soil erosion, depletion of soil fertility, and too rapid release of water from land where it falls, thereby adversely affecting the national welfare ... and endangering an adequate supply of water for agricultural and nonagricultural use. ... It is in the interest of the general welfare that the soil and water resources of the nation not be wasted and the soils depleted in the production of such burdensome surpluses and that interstate and foreign commerce in agriculture be protected from excessive supplies. It is hereby declared to be the policy of the Congress and the purposes of this title (Soil Bank Act) to protect and increase farm income, to protect national soil, water, and forest and wildlife resources from waste and depletion. ... To accomplish these noteworthy objectives by reducing agricultural production, Congress authorized the expenditure of \$1,100,000,000 per year. Isn't it a bit surprising that drainage, a practice which defeats almost every purpose and objective of the

Soil Bank, would be so vigorously pursued by the same arm of government and in the same region and county and probably on many of the same farms?

### The Insecticide Problem

Chemical warfare against insect and other pest enemies has reached the point where it threatens the well-being of man and society. Even so, we should realize that pesticides were developed in response to a public need and demand. Controls wisely and skillfully used are in the public interest and are here to stay. Wisely applied under mature, responsible and enlightened leadership, pesticides have done much to improve agriculture, affect better health and generally improve the American way of life. Improperly and extravagantly used, they are doing serious damage to wildlife. Only time can tell what injury may befall our citizens because of their misuse and overuse.

Cancer is rapidly increasing and many believe that this increase may be associated with the bug killing poisons that are so widely and indiscriminately used in homes, gardens and fields.

Today well over 12,500 brand name formulations and more than 200 basic compounds are on the market. Most of these were unknown ten years ago. Through trade associations and high pressure salesmanship, the pesticide industry and government agencies have fostered public demand for control. It is truly big business. The total amount of pesticide is unknown. However, in 1958, according to the U. S. Commodity Stabilization of U.S.D.A. some 574,213,000 pounds of just 15 chemicals were produced in this country. Many millions of pounds of other insecticides and still more millions of pounds each for herbicides, fungicides, and rodenticides were manufactured and still more millions are imported for use in this country.

These astronomical figures in most instances constitute only the technical poisons before the bulky carriers, solvents, emulsifiers, powders and clays are added. Some of the carriers, solvents and emulsifiers are also very poisonous and in the aggregate amount to 25 to 30 millions of gallons. Probably over 3 billion pounds of dry and liquid chemicals are sprayed over about 100,000,000 acres of our crop and timber lands annually to kill insects, weeds and plant diseases.

The total immediate or long-time effects of control are as yet unknown. Despite the callous assurance from some pesticide manufacturers, salesmen and operators and from too many officials in the control arm of government, that no significant damage is or can result, there is an ever growing array of facts which indicate that serious damage in local and sometimes in extensive areas is occurring. The indirect and long-term effects of all pesticides are imperfectly known, but enough facts on a few of the more common poisons give warning that it is the point of wisdom to be cautious and keep control to a minimum, at least until research reveals a safer course.

The cranberry episode of a recent Thanksgiving and the ruling of zero tolerance of various pesticides in foods (vegetables, meats and milk) by the U. S. Food and Drug Administration should give convincing evidence that the dangers to human health may be real and serious. Why take a dangerous risk when there is no need of it? Much damage has already resulted to some of our best known and best loved birds of town and country, such as robins, thrashers and bluebirds.

We do not oppose pesticidal control, per se, but only the excessive, irresponsible and unwise approach to this complex and difficult problem.

# Open Season on Hunters

By RAYMOND SCHUESSLER

Commission Photos by Kesteloo

**T**HE HUNTER dismounted from his horse and proceeded cautiously on foot through the dense brush. For 30 minutes he stalked his prey, circling until he sighted it in heavy underbrush and mesquite. He took careful aim and fired.

His horse dropped dead.

It is careless and tragic enough to lose a fine horse, but how about the hunter in western New York who killed three hunters with one bullet last year?

Each year, about 300 hunters return dead from the woods, blasted by their own or their companions' guns, and when heart attacks and drownings are added to the list the total is over 400.

It's not that hunting isn't a safe sport considering that 16 million take to the woods each year, but nearly every one of those deaths is due to carelessness. One would think it was open season on man.

There's no reason why a loaded gun should have been leaned upright in a tent, where a jar knocked it to the ground and blew the head off a sleeping hunter; or why a father should have told his son to shoot while he scoured the bushes. His son, of course, blasted him.

In Washington State a boy tried to club a porcupine with his gun butt. The gun went off and he killed himself instead. A little way off, two men were killed by a single ricocheting bullet as they stood back to back.

All hunting accidents are grimly ridiculous, I suppose because of human nature. If hunters today were restricted to lance and scimitar they would be sure zealously, though accidentally, to disembowel themselves or someone else. Even a

slingshot in the woods would leave some poor Nimrod a Cyclops.

But hunting can be made entirely safe if all huntsmen, especially initiates, will learn the safe commandments of hunting.

The huge loss of human life could be decreased immeasurably if all hunting clubs in the country conducted classes for tyro hunters. It would be wise, too, for all states to issue no license unless an applicant could prove he knew how to handle a gun and knew field etiquette.

Experienced shooters will make certain that a gun isn't loaded by opening the action, or unloading both chamber and magazine, before getting into a car, climbing a fence or hand-



Another must: "Always be sure the barrel and action are free of obstructions."



"Never leave your gun unattended unless you unload it first," points out the experienced hunter to his novice hunter son.

ing the weapon to a friend for examination. Careful riflemen and shotgunners never aim loaded guns idly at nearby objects. Should the rifle be discharged in this position—and such accidents do happen!—one or more of the shooters stands a good chance of being seriously injured by flying pieces of metal from the shattered object, or by a dangerous ricochet of the bullet.

When two or more shotgunners become separated while working thick, brushy bird cover, they should be especially careful until contact is re-established or the exact whereabouts of each one has been made known to the other. Firing a shotgun in any direction at head level, or below, under such conditions can be extremely dangerous. Likewise, riflemen stalking large game animals, such as deer, in thick woods where clear vision is limited to a few yards, should always avoid shooting at moving objects which they hear but cannot, or at best, only indistinctly, see. Many deer hunters are accidentally killed or seriously injured during each fall hunting season by other riflemen who fail to observe this precaution.

Where it is necessary for two hunters to travel single file along a path or trail, the man in the lead should always carry his gun with the muzzle forward, never over his shoulder or in the crook of his arm.

Never hand a gun to your companion muzzle first. Any one of a number of things could happen to discharge the

weapon while it is in the position shown. Always open the action, or drop the barrels if the gun is of the double-barrel type, to make sure that it is not loaded. In this connection, keep in mind that it is unlawful in most states to transport rifles or shotguns in a car without taking the gun down, if it is of the take-down type, or slipping it into a carrying case. Before placing the gun in the case, make sure that it is not loaded.

Here are the hunter's ten commandments:

1. Treat every gun with the respect due a loaded gun. This is the cardinal rule.
2. Carry only empty guns, taken down or with the action open, into your automobile, camp or home.
3. Always be sure that the barrel and action are clear of obstructions.
4. Always carry your gun so that you can control the direction of the muzzle, even if you stumble. Never hunt with anyone who carries his gun with the safety off.
5. Be sure of your target before you pull the trigger.
6. Never point a gun at anything you do not want to shoot. Make sure of your partner's location before firing at anything. Veteran hunters rarely hunt with more than one companion.
7. Never leave your gun unattended unless you unload it first.
8. Never climb a tree or a fence with a loaded gun.
9. Never shoot at a flat, hard surface or the surface of water.
10. Do not mix gunpowder and alcohol.

## THE MANAGEMENT OF UPLAND GAME IN VIRGINIA

(Continued from page 7)

fishing. The bulk of this acreage is in the western part of the state simply because that is where it was available at a reasonable price. Ideally, it would be desirable to have this land, or some of this land, in the Tidewater or Piedmont section of the state, nearer the larger centers of population. It simply is not available in large tracts in these areas and if it were available the cost would be prohibitive.

Another very real opportunity for public hunting is the land belonging to the large pulp and timber companies and the military installations in Virginia. Virginia has taken advantage of this opportunity and at the present time has about 46,000 acres of private land under cooperative management. In addition, 117,000 acres of land belonging to the U. S. Army, and 54,750 under control of the U. S. Corps of Engineers are under cooperative management and open to public hunting and fishing. A considerable amount of public hunting is permitted on some of the large pulp company holdings, even where no cooperative arrangement exists. In many ways the advantages of managing such lands under a cooperative basis for public hunting and fishing outweigh the disadvantages of not owning the land outright. For example, fire protection and suppression are the responsibility of the Division of Forestry and the cost is borne by that agency. Surveying and line location are an owner responsibility. Timber management is the owner's responsibility. The county still benefits from the tax revenue. The management cost on these cooperative areas is very low; thus we can provide more land for public hunting for less money than by purchasing outright.

These large landowners, like the Commission, are interested in taking advantage of the wildlife resource on their property. The primary reason for permitting public hunting on their property, however, is to develop a favorable relation-



Commission Photo by Cutler  
Game Manager D. B. Duffer (left) chats with Game Biologist John B. Redd, Jr. about developments on the Kerr Reservoir Wildlife Management Area.

ship with the public in the interest of protecting their property against forest fire and timber theft. A friendly public makes the protection of this property much easier and assures help when it is needed.

No charge is made for hunting on private land or on military installations under cooperative management at this time. Only the proper license is required. On military reservations (Camp Pickett and A. P. Hill) the hunter is required to obtain a free permit, obtainable at a check station on the post. In return for permitting hunting and fishing for game species by properly licensed hunters and fishermen, the Commission has agreed, in most cases, to erect signs marking the area as a cooperative hunting area and to develop and maintain the area to benefit wildlife in accordance with an annual work plan. The plan is approved by proper representatives of the Commission and the company or the post commander. The Commission agrees to patrol the land during the hunting and fishing season and during periods of high fire danger. The agreement with private landowners, which may be terminated by either party on 60 days notice, runs for three years and is subject to renewal at the end of that time. In the case of the military reservations, the agreement runs indefinitely or until revoked by the Commission or the military authorities.

One of the main problems encountered on some of the Commission-owned and cooperative areas is to keep them from reverting to brush. Every bit of the work we can get from tenants in keeping a large percent of the area open by cultivation or other means releases our men for other jobs that need to be done, such as timber management, trails and road construction, and law enforcement work. By leasing all land suitable for crops to qualified individuals under conditions which constantly improve the quality of the land and leaving it in a condition beneficial to wildlife, we get the job done in a more economical way than if we attempted to do the job ourselves.

It is apparent that all of the states in the Southeast have embarked on a land acquisition program in an effort to provide public hunting areas for upland game as well as for waterfowl. An aggressive program to obtain land for public hunting through cooperative arrangements with large landowners, both public and private, is currently under way in just about every state in the Southeast. Virginia, while a relative newcomer in the field, has approximately 283,000 acres of public and private land under cooperative game management, exclusive of national-forest land and state-forest lands. The picture is equally bright in the Southeast as a whole with a total of at least 15,900,000 acres of land available for public hunting.



The slate-colored junco is but one of many species of birds which winter in Virginia and can be attracted to window ledge feeding stations.

*Brighten your winter days with—*

## Birds at Your Window

By ALVIN H. PETERS

*Clifton Forge, Virginia*

Commission Photos by Kesteloo

**N**OW is the time of year for every family to see, through the picture windows of their homes, an array of colors that will liven their spirits and carry them through to spring. To achieve this, they have merely to set up bird-feeding stations in their yards.

There are many plans for feeding stations but the simplest of these may be best. A six-foot piece of one-inch pipe driven 10 to 12 inches into the ground, with a 24-inch square surface fastened securely to the top, will do nicely.

Birds of all colors, size, and personalities are attracted by crude little feeders such as this stocked with plenty of cracked corn, bread crumbs, and wheat.

You may say, "But we have no birds." Within 24 hours after a feeder has been placed, you'll be watching beautiful scarlet cardinals, black-capped chickadees, white-breasted nuthatches, slate-colored juncos, and, of course, friendly English sparrows.

Where there is food you can also expect Mr. Jay with his

striking blue, black and white colors. The jaybird is considered undesirable by many, but who can conceive of a color scheme more attractive than that of the jay.

One of the nicest times of the day is just at daybreak, and it is then that the redbird, junco, nuthatch and chickadee come sailing in to the feeder. The chipping sparrow will dart in and out among the other birds, grabbing a bite here and there, never quite sure he is welcome. When the constant movement of dazzling colors is at its height, the jay will come screaming in, mixing paints like an artist. Two heartbeats later he is gone with a bill full of corn, and the smaller birds are back feeding again.

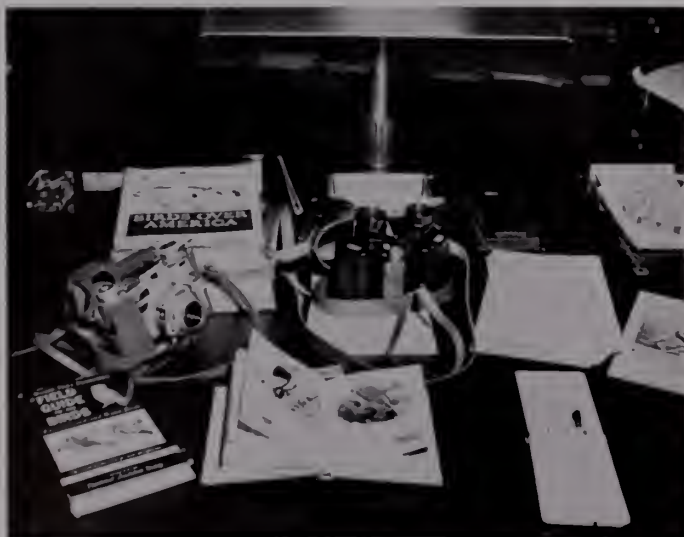
From fall to spring is often hard for these seed-eaters to find food enough to keep them warm, and many die in the snow for want of food. We shouldn't want a "thank you" from the birds for such a fine restaurant. Perhaps it is we who should say, "Thank you, little birds." Not only do these small fellows bring much happiness into our lives, but they rid the world of many weed seeds and destructive insects.

I don't think anyone could get any closer to God than through nature, or any closer to nature than by peering into the life of a hungry bird.

### Killing of White Deer Angers People

Pennsylvania Game Protector Russell Meyer was in a quandary when he reported: "Recently, an albino button buck deer was killed and left to rot in my district. Folks in the locality were quite incensed over the illegal, wasteful act. One organization posted a \$50 reward for information leading to the conviction of the person who committed the crime.

"On the opening day of small game season this year, a man was wounded in the face by fine shot while hunting squirrels. The offender fled, leaving the victim in the woods where he fell. No reward was offered for information leading to the apprehension of the person who injured the man but did not go to his aid as the Game Law requires and moral law says he should. Could this be because white deer are not so common as people?"



Avid bird watchers use binoculars and identification guides to help identify their feathered visitors and notebooks and cameras to record these visits.

# CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

**COMMISSION SHORTENS QUAIL SEASON IN SOUTHWEST, SETS TROUT SEASON.** The Virginia Commission of Game and Inland Fisheries, on December 9, amended its Regulation 2 so as to prohibit the hunting of quail after December 31, for the 1960 season only, in the counties of Bland, Buchanan, Carroll, Dickenson, Giles, Grayson, Lee, Pulaski, Russell, Scott, Smyth, Tazewell, Washington, Wise and Wythe. Deep snows last winter reduced the quail population in this area, and shortening of the season there by two weeks was deemed advisable.

The Commission authorized its executive director, Chester Phelps, to draw up a proposal for Virginia's first spring season on turkey gobblers.

The Commission, at its December 9 meeting, also passed several important fish regulation changes. These changes, which were proposed by the Commission at its October 14 meeting, include a trout season which will start two weeks earlier than this year's and will include closed periods to facilitate in-season stocking and eliminate hatchery truck-following.

It will run from 12 o'clock noon, the first Saturday in April (April 1 this year) to one hour after sunset December 31, and from one hour before sunrise to one hour after sunset on intervening days, with the following exceptions:

The trout season will be closed from the first Monday in May through the following Friday in Alleghany, Augusta, Bath, Bland, Botetourt, Buchanan, Craig, Dickenson, Giles, Highland, Lee, Rockbridge, Rockingham, Russell, Scott, Smyth, Tazewell, Washington, Wise and Wythe counties. The trout season will be closed from the second Monday in May through the following Friday in Albemarle, Amherst, Bedford, Carroll, Floyd, Franklin, Frederick, Grayson, Greene, Henry, Madison (except in the Rapidan and Staunton rivers and their tributaries upstream from a sign at the lower Shenandoah National Park boundary), Montgomery, Nelson, Page, Patrick, Pulaski, Rappahannock, Roanoke, Shenandoah and Warren counties.

It will be unlawful to fish in a stocked trout stream after the daily creel limit of trout (8) is obtained.

The Rapidan and Staunton rivers in Madison County above the lower Shenandoah National Park boundary were set aside for "fishing for fun" using single barbless hooks only and returning all fish caught to the stream immediately. The season on these streams will be from the opening of the statewide season to October 15.

Commission regulation No. 106 was rescinded to allow fishing in Craig and John's creeks in Craig County between May 1 and June 19.

The season for fishing for carp and gar with bow and arrow was extended two months to run from March 1 through October 31, daylight hours only. This season ran April 1 through September 30 last year.

Two counties, Campbell and Halifax, were added to the list of counties in which it is lawful to take non-game fish at any time by snagging, grabbing, snaring, gigging, and/or striking iron in all waters except public impoundments and those waters stocked by the game commission.



The Broad Run Game Management Unit in Craig County presents a Christmas card scene in winter.



Virginia's "snow law" prohibits hunting all game when snow covers

## *Virginia's Snow*

Text and Photos

Virginia is a land of four seasons . . . and each season is as different, one from the other, as the very land to which it comes. Much to the surprise of northerners, Virginia is, at times, a winter wonderland from her salty seashore to her forested mountain tops. Virginians expect at least two or three heavy snows yearly to blanket their landscape with a frosted coating of "old man winter." The change to a gleaming white world is a pleasant one for hearty Virginians who like to meet



Wind-blown mountain forests in the Jefferson National Forest are silhouetted against a deep blue sky.



Icy trout waters rush through the often snow-covered Jefferson National Forest in Southwest Virginia.



ound except deer, bear, elk, migratory waterfowl and fox with dogs.

## *-white Dress*

erge H. Harrison

winter's blustering challenge. Sportsmen's clubs, service clubs, and youth groups often venture into winter's coldest days to feed wildlife, the sacks of corn and other grain often carried many miles over Virginia's roughest terrain. The hunter also enjoys the crisp, snow-covered woods in his quest for deer, bear, elk, migratory waterfowl or foxes with dogs. It is illegal to hunt other game while snow covers the ground in the Old Dominion. "When winter comes, can spring be far behind?"



Hunting camps with their old "pot-bellied" stoves offer a warm atmosphere on the inside, but a frigid one outside.



Winter settles in the Roanoke Valley near the Montgomery County-Roanoke County line on State Route 785.



Tracking deer through a fresh snow can be rewarding for the determined hunter, but, all too often, the deer has the last laugh.

## **Philpott Reservoir**

By HAL MYERS, JR.

*District Game Biologist*

**P**HILPOTT RESERVOIR, a man-made lake of some 3,000 acres, lies in the rugged foothills of the Blue Ridge Mountains and was so named from the near-by village of Philpott in Henry County. Constructed under the direction of the Norfolk District of the Corps of Engineers, U. S. Army, the project was completed in 1953 primarily for flood control and electric power production.

The reservoir area, consisting of nearly 10,000 acres, is located in Henry, Franklin, and Patrick Counties approximately two miles northeast of Bassett, Virginia, and 14 miles from the city of Martinsville, Virginia. The area adjoins Fairy Stone State Park which is also a noted summer recreation area.

The entire fringe of Philpott Lake and its numerous tributaries is a naturalist's paradise and a place where one can appreciate and observe all of our natural resources—water, forest, wildlife, soil, and minerals.

On August 11, 1959, a cooperative agreement was entered into between the Virginia Commission of Game and Inland Fisheries and the Corps of Engineers to make the Philpott Reservoir area a public hunting and fishing area. An additional 5,000-acre tract known as Fairy Stone Farms, adjacent to Philpott Reservoir, has also been obtained under cooperative agreement for public hunting. Fairy Stone State Park, an area of approximately 5,000 acres on which no hunting is permitted, is practically surrounded by these two areas and, therefore, serves as a natural refuge, making a total of 15,000 acres for wildlife. The merits of this area are numerous, since it is located in an industrial section where there is a great demand for outdoor recreation.

This wildlife management area consists of hilly rugged terrain typical of this section of the State. Originally the country was thinly settled, and the abandoned homesites and small farm fields are ideal for wildlife habitat improvement work. The soil is of good quality and it is not unusual to hear a comment on the high yield in gallons of "moonshine" that once was produced from an acre of corn or rye.

The main species of wildlife found in the area are deer, turkey, quail, rabbit, squirrel, opossum, grouse, and raccoon. With the water nearby for protection, most of these species have increased in number, especially the deer. Deer were brought in from Wisconsin and released in Patrick County around 1947. Until that time, few deer were present in the area. Today the Philpott area has a good-sized young deer herd, and hunters have been proud of the size of the animals and the trophy heads bagged there. Since the first open season 1957, bucks weighing 200 pounds and over have not been uncommon. During the 1959 season, 38 bucks were taken around the reservoir, and the bow hunters made good use of the area during the archery season. According to the technical deer data collected throughout the State, the herd in this area has been tops in weight and antler development.

Management work on the area since it was obtained under cooperative agreement has consisted mainly of habitat improvement. Thirty-five wildlife clearings have been established on the Philpott and Fairystone Farms area and seeded to a

permanent cover of small grain and ladino clover. In addition, Korean lespedeza has been seeded on the larger fields for quail utilization. Because of the small size of most of the clearings and the heavy deer browsing, bulldozer work was required to enlarge the acreage of some clearings to sufficient size. In developing the area for wildlife, accessibility with farm machinery has been a problem, and many of the clearings were established by moving equipment from point to point by barge and boat.

To aid the hunter in locating the boundaries, the standard yellow and black signs used by the game commission on public hunting areas have been erected at all entrance points.

Waterfowl have never been abundant on Philpott Lake because of the deep shoreline and lack of aquatic growth in the clear waters. However, at times, sizable flocks of ducks and geese put down there for a short stay during migration.

Hunting and fishing is permitted in accordance with all applicable federal and state laws, with the main exception being the use of shotguns only on the federal government property.

Fishing is exceptionally good in the lake for bass (large-mouth and smallmouth), bream, and crappie. The lake, having more than 100 miles of shoreline, may easily be classed as being the cleanest and having the prettiest color for its size in the State of Virginia. Bass over five pounds in size are not uncommon and occasionally one is hooked weighing as high as 12 pounds. Carp, "cats" and suckers are also abundant and provide many of the local people with the sport of bank fishing. For fishing accessibility around the lake, a total of 12 public access areas and launching ramps have been constructed.

The water released through the generating units below the dam to the Smith River has a constant temperature of about 40 degrees. With this degree of coldness and through the trout stocking program, this stream has become popular with many trout anglers. The size of the stream makes it impossible to catch them all out and also makes fly fishing a favorite method. Best fishing is found during the hours when the powerhouse is not in operation; then, the stream decreases in depth and the pools can be reached by wading.

Camping and picnicking is permitted on the area, and the Corps of Engineers has developed many locations for this purpose. Approximately 60 camp sites have been developed around four major locations and these areas are equipped with table, fireplace, tent site, garbage cans and, on some, approved drinking water. For those who desire to get even closer to nature, some camp sites have been developed which can only be reached by means of boat. In addition, two commercial marinas have been developed to provide additional recreational facilities.

The 1959 attendance at Philpott Reservoir as compiled by C. H. Burrage, Reservoir Manager, was 632,200 individuals. This was an increase of 47 percent over the preceding year. A breakdown of this figure into classes of recreation is as follows: Campers—7,700; picnickers—21,500; swimmers—11,000; boating—75,000; water skiers—7,500; fishermen—27,000; hunters—3,000; and sightseers—500,000.



Commission Photo by Cutler

Game Biologist Myers shows Reservoir Manager Burrage (left) and Game Warden E. T. Lemons the location of one of the game habitat improvements on an aerial photo of the reservoir.



Commission Photo by Cutler

The game commission's yellow and black "welcome sportsmen" signs are unfortunately used as targets by thoughtless gunners, Warden Lemons points out.



Commission Photo by Kesteloo

Biologist Myers (above) shows where a buck rubbed the velvet off his antlers on a sapling near the reservoir. Warden T. J. Clement (below) stands waist deep in nearby game food planting.



Commission Photo by Cutler

Maps, camping permits, and full information on the many recreational opportunities offered by this area can be obtained at the reservoir manager's office at Philpott Park which is located just above the dam.

### Wise Management of Giles-Bland Game Area Pays Off

Three bull elk were harvested during the 1960 three-day elk season in and near the Dismal game management unit on national forest land in Giles and Bland counties. This is the third year in succession that elk have been harvested in this area.

Increased elk, deer, turkey and grouse populations in the Dismal Creek-No Business Creek area are, in large measure, the result of efforts on behalf of the wildlife put forth by personnel of the Virginia Commission of Game and Inland Fisheries and the U. S. Forest Service.

Since the purchase of the land which makes up this unit by the U. S. Forest Service during World War II, the state game commission has invested some \$160,000 in the management and development of this area to provide better hunting.

Richard H. Cross, Jr., chief of the commission's game division, describes the history of the work done there in these words:

"It took a lot of foresight and imagination to tackle the job of managing "Dismal-No Business" with any real enthusiasm back in 1948. However, the Jefferson National Forest and the Virginia Commission of Game and Inland Fisheries began the job of rebuilding. Increased protection reduced the incidence of fires thus saving what little there was to build on.

"Erosion control was the top priority job in the beginning. The 75 miles of abandoned logging roads and bare log landings were levelled with bulldozers, cultivated, limed, fertilized and seeded wherever a sufficient amount of topsoil remained. The cultivating job was accomplished with horses, jeeps pulling farm machinery and even garden tractors. Seed mixtures were chosen to produce wildlife food as well as to curb and prevent erosion. On areas of bare mineral soil, water bars and other mechanical devices were constructed to deflect surface water onto areas of higher absorption. A constant battle was waged to keep a minimum road and trail system in usable condition. The Forest Service was practically without funds for this type of work and the commission justified its effort as a means of improving access for wildlife management workers, hunters and fishermen.

"As for wildlife management, deer brood stock was procured by importing animals trapped in Craig and Smyth counties and purchasing others from the State of Pennsylvania. In all, 60 deer were released on the area. The first legal buck season yielded 40 fine specimens in 1958. This season 674 deer were taken in the two-county area.

"We believe we have reestablished wild turkeys on Dismal-No Business where they were exterminated some 30 to 40 years ago. The hunting of other species has definitely improved.

"Between 1916 and 1918 and again in 1935, the Commission, in cooperation with interested private citizens, purchased elk and transplanted them from the Yellowstone National Park for release on the area. The hunting of elk was permitted as soon as the herd reached sufficient size."

This season the three bull elk which were taken in the Dismal unit were a 10-pointer by Asa Rasnake of Bastian, a 4-point bull by James Jamerson of Arlington, and a two-pointer by Lee Burton of Narrows.



Commission Photo by Kesteloo

Research workers are trying to find how to improve Back Bay, Virginia for waterfowl without harming the outstanding largemouth bass fishery there.

## *A Virginia Research Report—*

# **A Study of the Largemouth Bass in Back Bay**

By ROBERT E. WOLLITZ

*District Fish Biologist*

*Assigned to Virginia Fisheries Management Investigations*

*(Dingell-Johnson Federal Aid Project 5-R)*

**B**ACK BAY, located in the southeastern corner of Princess Anne County, Virginia, may offer the best largemouth bass fishing in the state of Virginia and certainly ranks among the best largemouth areas on the East Coast. It is a shallow body of water, averaging four feet in depth, and encompasses an area of 25,000 to 30,000 acres. Much of this area consists of islands and small ponds.

In 1958 a research study was undertaken by the game commissions of Virginia and North Carolina and the U. S. Fish and Wildlife Service to determine the reason for decreased waterfowl use of the Back Bay area. Since any management of the area for waterfowl resulting from this study would possibly affect the largemouth bass, a parallel study on the bass was initiated in July 1959.

After a year of study, an abundance of information has been collected and analyzed.

From June through October 1960, creel censuses were conducted at four boat landings: Murden, Lovitt, Davis, and Bay Haven. This creel census indicated that 6,234 fishermen caught 6,820 bass during this period. These figures, broken down, mean that, during a five-month period, each fisherman had over four acres in which to fish and caught an average of slightly over one bass per trip.

In addition to largemouth bass, a large variety of other fish are caught at Back Bay including chain pickerel, black crappie, bluegill, white and yellow perch, and, occasionally, striped bass and flounder.

Most of the largemouth bass are caught on artificial lures, especially the popping bug. Probably the next most preferred lure is the jitterbug. Both of these lures are used primarily during late spring and summer. In the early spring and late fall, the best lure is the Johnson silver spoon with a piece of pork rind or a live minnow.

During July 1959 four ponds, totaling about 11 acres, were poisoned with rotenone, a fish sufficant, to determine the reproductive success of the largemouth bass and other important sport fish. This population sampling, when done yearly, will also show any changes in the fish population; that is, whether the various species of fish are increasing or decreasing in abundance.

The reproductive success for all species of fish in question appeared to be excellent with the exception of chain pickerel. In addition to reproductive success and changes in population abundance, this sample indicated that there was an abundance of available forage fish for the largemouth bass. Overall this population sample indicated that Back Bay was in excellent condition, fishwise, and would offer as good or better largemouth fishing at least for the next few years.

To learn how far the largemouth bass travel and the rate at which various sizes of bass are being harvested, 1,867 bass were tagged and released in Back Bay. These fish were caught by commercial fishermen hired for this purpose, using haul seines. About half of these fish were weighed and measured. Measurements of these fish indicated that fish caught by

fishermen would range from 10 to 21 inches in length, most of which would be 11- and 12-inch fish followed in abundance by 14- and 15-inch fish. The average weight of each size of bass is given in Table 1.

Table 1. Average weight of largemouth bass in Back Bay by inch groups.

Length in inches	10	11	12	13	14	15	16	17	18	19	20	21
Weight in pounds	0.5	0.7	0.8	1.1	1.4	1.7	2.1	2.7	3.1	4.0	4.3	5.6

Information on the distance travelled by the tagged fish has not yet been analyzed. During the winter of 1960-61, another 2,000 bass will be tagged to obtain additional information.

Because the current waterfowl investigation may indicate that the introduction of salt water from the ocean would improve the waterfowl food plant situation in the bay, studies were conducted to determine what percentage of salt water the largemouth bass will tolerate. These studies indicated that they could withstand salinities as high as 40 percent of sea-strength for a short period and 30 percent for a long period, but when salinities were raised above 20 percent the bass would not eat. Additional studies were carried out to try and determine whether or not the bass would spawn successfully in brackish water. To date the highest salinity bass were observed to spawn in was five percent. Further studies along this line are planned.

## "I Resolve . . ."

By HENRY P. DAVIS

TO many of us, with good intentions and light resistance, annual resolutions to improve ourselves and conditions in general are things to be avoided because we think we cannot, or will not, keep them. Too often we let the fact that we did not live up to the resolutions made last year dissuade us from making resolutions with the coming of the New Year.

Just because we failed once is no reason why we should not

try again. There is every reason why all sportsmen should start 1961 with a definite set of Sportsmen's Resolutions and wind up this span with these determinations unmarred by periods of laxity.

There is only one way in which we can improve our own outdoor recreational opportunities. That is by **DOING SOMETHING** about them. Sure, it takes more than resolutions to get the job done, but if they serve no other purpose than to bring home a realization of our *own* responsibilities in the sporting scheme of things, they will have made a considerable contribution to the future pleasure of ourselves and others. Regardless of how we feel about making formal resolutions, here are a few suggestions that are worth adoption.

"During 1961, I will

1. Join a sportsmen's club and take an active part in its program to better hunting and fishing conditions in my own community.
2. Support and, to the extent of my ability, participate in the efforts of national organizations dedicated to wildlife restoration.
3. Obey the game and fish laws and encourage others to do the same.
4. Take no more than my fair share of game and fish regardless of bag and creel limits.
5. Make friends with a number of farmers, and try to bring about a better farmer-sportsman relationship by both precept and my own example.
6. Make occasional trips into the field during closed seasons and gain more first-hand knowledge about habitat conditions.
7. Try to apply this knowledge in constructive suggestions for my club's activity program.
8. Respect the rights and opinions of both the landowner and my fellow sportsmen.
9. Take a youngster hunting and fishing at least once during the year.
10. Help teach novitiate hunters the principles of safe gun handling and encourage, in every way I can, reduction of hunting and fishing accidents."



Commission Photo by Kesteloo

Resolve to obey the game and fish laws and take no more than your fair share of game and fish regardless of bag and creel limits.



*Bird of the Month:*

# The Evening Grosbeak

By DR. J. J. MURRAY  
*Lexington, Virginia*

**N**OW is the time to watch for a strange bird that has invaded Virginia in recent winters. This is the evening grosbeak, a bird of the northern spruce woods. "Grosbeak," of course, means "great beak," which is the most noticeable feature of the bird. The bill is greenish-yellow and unusually large for the size of the bird.

The evening grosbeak is about the size of our common wood thrush. The general color of the male is yellow, deepening on the upper breast and around the shoulders to brownish-yellow or mustard color. The cap, the wings, and the tail are black, with a large white patch in the wings. The female is smoky gray, the wings and tail darker, with white patches in the wings and white corners to the tail. Immature birds are duller. The plumages, both of males and females, are quite variable, so that in a flock there may be five or six types of plumage. The bill, the size, and the habit of flocking, however, make identification simple. In any plumage it is a striking and beautiful bird.

Since it is only a winter visitor in Virginia, we do not hear the evening grosbeak's song. The call is something like the chirp of an English sparrow, although much brighter and much sweeter. There is a distinctive quality about the note which makes it, when once heard, unmistakable.

These grosbeaks are greedy feeders. Their favorite food seems to be the dry seeds of the box elder. Many other kinds of seeds are eaten, as well as the buds on maples and other trees. They love sunflower seeds, so much so that if you

begin putting a supply of these on your feeding tray, the grosbeaks will eat you out of house and home. Still, this is the best way of attracting them to your yard.

One rarely sees a single evening grosbeak. Sociable birds, they travel in flocks, usually from six to 20 at a time but sometimes up to a hundred or more. A characteristic way of feeding is for the flock to land in a tree in the yard, begin dropping down to the ground one after another like falling leaves, then fly back into the tree one or two at a time as if the wind were blowing the leaves off the ground again. They are not particularly shy. In fact, they seem to prefer the vicinity of homes though they can be seen in rural thickets as well.

It is only of late years that we can have the experience of seeing these birds in Virginia. Once an unknown bird in our State, it is now a rather common visitor in most winters. The first Virginia record was made when Mr. and Mrs. Richard Graham saw a single bird at Alexandria in March, 1940. In 1944 a small flock visited Lexington in late spring. Since then flocks have come down nearly every winter, some years in great abundance all over the State. In the winter of 1951-52 there was a heavy invasion.

No one knows just why this spread of these northern birds began nor why it has continued. It may be connected with the increase of the box elder tree. Possibly it also has something to do with food scarcity and population pressure in its Canada home country.



### **Historyland Club Gives Food Patch Awards; Bill Allensworth Wins First Prize**

The Historyland Hunt Club of Oak Grove in Westmoreland County held their second annual meeting to present awards for its wildlife food patch contest on November 11.

Westmoreland County game warden Frank Settle and district game biologist Herman Tuttle judged the wildlife food patches and Tuttle presented the following awards:

First prize, \$25.00, to William Allensworth; second prize, \$15.00, to Jimmy Bryant; third prize, \$10.00, to James Carpenter. Two-dollar honorable mentions went to Connely Thomas Worrel, Bobbie Lee Combs, William Parker Crutchfield, William Cralle, and Elmer Ray Worrell.

Twenty-eight young people entered the wildlife food patch contest this year and each received a free subscription to *Virginia Wildlife* magazine.

### **Bedford Club Sponsors Food Patch Contest**

The Bedford County Game and Fish Association voted to spend \$100.00 for prizes and expenses in connection with the county wildlife food patch contest this year. The contest is to be held among the members of the Bedford County 4-H and FFA clubs. Lacey Putney, president of the Game and Fish Association, said that they will furnish wire and fencing for the food patches and will secure the seed or plants to set out.

### **Capron Elementary Observes Conservation Week Again This Year**

Capron Elementary School in Southampton County observed Natural Resource Conservation week again this year with a special program presented by the first, second, third, fifth and sixth grades.

Readings, skits, songs, and guest speakers covering many phases of the conservation problems in Virginia all appeared on the special program.

### **Winchester 11-Year-Olds Bag Deer**

Two 11-year-old boys from Winchester bagged bucks during the first two days of hunting season in Frederick County this season.

First to shoot his deer was Gary Lee Dunn, son of Mr. and Mrs. Linwood Dunn of 361 Fox Drive, Winchester. Gary used a .410 shotgun to shoot his deer while hunting with his dad.



Commission Photo by Harrison  
Eleven-year-old Roland White, Jr. bagged a six-point buck in Frederick County in November.

On the second day of the deer season, Roland White, Jr. checked his six-point buck in Winchester. The 1½-year-old buck weighed 105 pounds dressed. Eleven-year-old Roland was hunting with his dad, Roland, Sr., at Mt. Williams in Frederick County when he shot his buck with a carbine.

### **Large Rockfish Caught**

Claude Dickens, 13-year-old son of C. W. Dickens of Richmond, caught a 20¼-pound striped bass (rockfish) in the Piankatank River last November. The lunker rock was caught on 25-pound test line with a sea nymph bait. The large striper is one of five that the father and son team caught that day.

### **Spring Garden Sophomore Wins FFA Wildlife Feed Plot Contest**

The 1960 Pittsylvania County Future Farmers of America Wildlife Feed Plot Contest was won by Reid Yates, a Spring Garden High School sophomore. Yates is the son of Mr. and Mrs. Frank Yates of Blairs. (See picture on page 26.)

Runners-up were Kenneth Hutcherson of Renan and Billy Eastwood of Dan River. These three winners were announced at the Gretna Izaak Walton League meeting.

Other top winners, in order of finish, were William Anderson, Climax FFA Chapter; H. A. Merricks, Gretna; Michael Jones, Whitmell; and Renford Finney, Callands. Although they were second at their schools, both David Booker of Renan and Lonnie White of Spring Garden were cited for excellent plots.

Representatives from the Commission of Game and Inland Fisheries judged the wildlife feed plots. Afterwards, they called the plots "some of the best ever observed." In most instances, the plots contain eight different types of seed that can be used from November to March by quail, wild turkeys, deer and rabbits.

Some 10 years ago, the Pittsylvania County vocational-agriculture departments started the wildlife rebuilding program. Along with other conservation-minded organizations, the vo-ag departments have worked with the game commission in distributing seed for approximately one thousand seed plots annually.

### **Covington Holds Hunting Safety Clinic Sponsored By Several Local Sportsmen's Clubs**

Twenty Covington youths attended a hunting safety clinic held at the National Guard Armory on November 12 in Covington. The event was held under the joint sponsorship of the Izaak Walton League, the Alleghany County Fish and Game Protective Association, and the Covington Recreation Department. The purpose of the clinic was to instruct those above the age of 12 in the use of firearms.



### Heavy Wildlife Use of Autumn Olive Noted in Virginia

Game Biologist J. W. Engle reports that a five-year-old planting of the exotic shrub "autumn olive" on national forest land in Highland County is producing a great deal of fruit and thereby providing considerable food for wildlife.

Engle found that song birds, wild turkeys, deer, bear, racoons and opossums used the experimental planting last fall and that the plants withstood both deer browsing and antler rubbing very well.

### State Fish Biologist Padfield Resigns

District Fish Biologist James H. Padfield resigned his state game commission position on November 15. Padfield, who had worked in the Harrisonburg area since he came with the Commission on July 1, 1959, returned to Tennessee to enter private business.



These wild turkeys were photographed by Special Game Warden A. G. Carter from his front porch in the heart of the new Gashen Wildlife Management Area in Rockbridge County.



Virginia's fish technicians, pictured at a recent get-together in Richmond (front row, from left): John R. Sheridan, Division Chief Robert G. Martin, Jack M. Hoffman; (rear row), Robert J. Domrase, Bradley Rawles, Robert E. Wallitz, and Dixie L. Shumate, Jr.



Virginia fish hatchery tap brass: (from left) Dixie Shumate, Sr., W. C. Hawley, C. P. Ramsey, L. V. Seaman, and Ralph Cash.

### Western Virginia Deer Kill Sets New Record

Although the official 1960 west-of-the-Blue Ridge deer kill total was not available at press time, the count had reached 16,352—considerably in excess of last season's total of 15,745 for deer bagged in counties having the one-week season.

### Wintering Waterfowl Increase at Back Bay-Currituck Sound

Ducks and geese by the thousands are wintering at Back Bay and Currituck Sound again this year. Aerial inventories of the waterfowl on the interstate area by Federal Biologist John S. Sincock revealed that, on November 17, a total of 165,258 birds were present. Of this number 41,723 were found in Virginia's Back Bay.

On November 26 the grand total observed was 219,967, of which 62,235 were seen in Back Bay. Of the November 26 Back Bay total only 17,345 were ducks, consisting of 5,600 dabblers, mostly baldpate, and 11,745 divers, 9,250 of which were ringnecks, 60 of which were redheads, and 345 of which were canvasbacks. In greater numbers were Canada geese (17,800), snow geese (9,000), and coot (12,440).

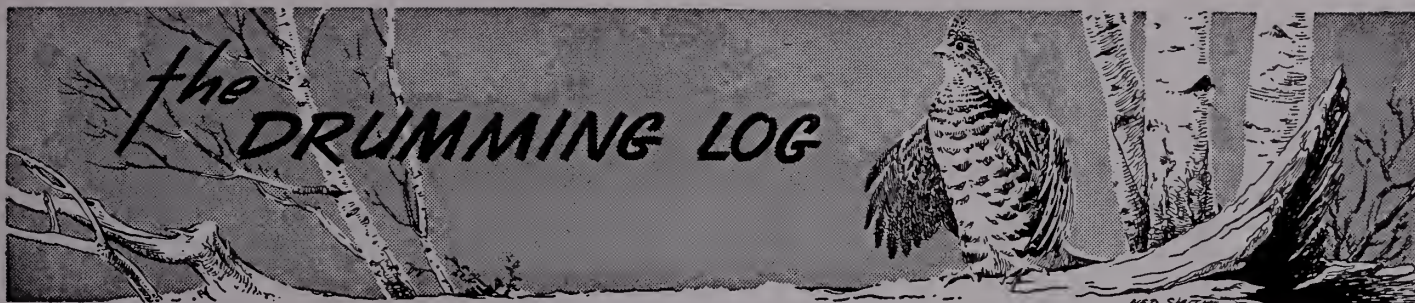
### Davey To Address Lumber Manufacturers

The third annual convention of the Lumber Manufacturers Association of Virginia will be held at the John Marshall Hotel in Richmond on January 28. The theme of this year's convention will be "Wood Utilization."

Stuart P. Davey, Staff Assistant of the Virginia Commission of Game and Inland Fisheries, will be the luncheon speaker. The title of his talk will be "How Virginia Lumbermen Provide Public Hunting." He will cover the recently signed agreements between private landowners and the Commission and the benefits of these agreements to the public.

### Non-Resident Hunting License Sales Soar

The sale of Virginia non-resident hunting licenses this year will probably be the greatest in history. License agents in the Washington, D. C.-Fairfax-Arlington area, the Augusta-Rockingham-Highland county area, the far southwest exhausted their normal supply of non-resident licenses and ordered more. In excess of 20,000 additional non-resident licenses and 16,500 non-resident deer-bear-turkey licenses were sent to agents during November.



## 50 Million Acres of Commercial Timberland Open for Recreation

More than 50 million acres of commercial timberlands owned by lumber, pulp, paper, plywood and other wood-processing companies are open for public recreation in one form or another.

American Forest Products Industries in 1960 surveyed 518 companies owning 86.2 per cent of forest industry commercial timberland, and found vast areas open to the public for hunting, fishing, camping, picnicking, hiking, skiing and other outdoor sports.

The survey covered 58,140,936 acres as compared to 46,263,852 acres surveyed in a 1956 study.

The new survey revealed that 53,654,702 acres—92.3 per cent of the acreage surveyed—are open to hunting in season.

Fishermen can enjoy their sport on nearly 40,000 miles of streams on lands of companies owning 56,646,326 acres, 97.4 per cent of the area surveyed.

Companies covered by the survey reported that annual recreation visits to their lands total 6,057,660.

"The new survey," said James C. McClellan, AFPI chief forester, "shows that these companies are not only growing wood required for useful products, but they also are making a major contribution to the recreation needs of our growing population."

The term "open" as used in tabulating results of the survey applies to the general public in most instances, said McClellan, yet it also applies to lands that are open only to community groups, sportsmen's clubs and others granted privileges by permit only. In some cases, company timberlands are available only for community use.

The survey showed that 107 companies operate 303 public parks and picnic areas, some of them elaborately equipped with free overnight facilities and services.

Forty-three companies plan additional parks in 1961, while 93 companies plan to develop parks after 1961.

Seven companies, the survey showed, employ professional recreational planners to achieve the greatest recreational programming for the public good.

Some 54,739 miles of roads have been developed by the companies and are open to the public.

According to the survey, some timberlands must be closed to the public because of fire danger and for logging safety—as well as for silvicultural reasons—but these companies receive excellent cooperation from recreationists for the most part, McClellan said.

A comparison of survey results show the following interesting statistics:

In 1956, a total of 90 companies with 13,908,504 acres required permits for

the 1956 survey was 127,490; the 1960 survey showed 149,357.

Number of artificial lakes available to fishermen has increased, from 228 in 1956 to 370 in 1960, while the number of companies charging for fishing has dropped, from 18 to five.

"Multiple-use management," McClellan said, "is largely responsible for the welcome extended to recreationists by this country's forest industries."

"And that welcome comes at a particularly appropriate time—when increasing population is causing more and more pressure on all our nation's recreational resources, private and government."

## Virginia Chapter of The Nature Conservancy Organized

America is showing a great concern today in the fast disappearing natural landscapes—the last remaining virgin forests, the original marsh and swamp, the local natural meadow and woodlot and cove where nature has ruled, undisturbed, for millennia of time. The obliteration of these last remaining bits of wild country threatens to continue to the point where we may not have soon even a small fraction of our once primeval America.

Realizing that the situation is critical . . . that something must be done now . . . groups of selfless, dedicated men and women are organizing into conservancy chapters the nation over to launch a program of wild areas acquisition and preservation.

Such a group was organized in Richmond, Virginia, on November 16, 1960, at the home of Mrs. John Bocock, staunch Virginia conservationist.

Elected to the statewide chapter of The Nature Conservancy—known as the Virginia chapter—were Dr. Ruskin S. Freer, chairman; Fred Packard, vice-chairman; Mrs. James W. Wiltshire, secretary; and Eustace Poor, treasurer. A seven-member board of directors also was elected, consisting of FitzGerald Bemiss, Mrs. John H. Bocock, George Flint, George Freeman, Dorothy Crandall, Mrs. Frank Carr, and Mrs. Edward M. Davis.

The nature conservancy movement in



some or all of the major recreation activities; the 1960 total was 80 companies with 10,721,391 acres.

Sixty-five companies in 1956 operated 137 parks and picnic areas as compared to 107 companies operating 303 parks and picnic areas in 1960.

Hunters in 1956 needed no permits to hunt on 32,377,567 acres, 70 per cent of the total surveyed; in 1960, a total of 42,649,461 acres—73.4 per cent—required no permit.

Acreage in game refuges and management areas in 1960 was nearly treble that of 1956—2,375,992 acres as compared to 891,277.

Acreage closed to hunting for other reasons in 1960 was less than in 1956—2,110,242 as compared to 2,635,035.

The annual big game kill as shown in

Virginia already has moved into high gear. Already acquired and safely in the natural areas system of the Division of Parks, Virginia Department of Conservation and Economic Development, are two strategic areas on the Eastern Shore—an unspoiled marsh and beach area of 759 acres on the bayside in Accomack County and 350-acre Bone Island on the oceanside in Northampton County. Purchase of these areas was made possible by the generosity of the Old Dominion Foundation and the Philadelphia Nature Conservancy.

Virginians and others interested in joining the Virginia chapter or learning more about it may do so by writing Dr. Ruskin S. Freer, Lynchburg College, Lynchburg, Virginia, or by sending in annual dues direct to The Nature Conservancy, 2039 K Street, N.W., Washington 6, D. C. Seventy percent of all monies collected by the national organization stays in the state chapter.

#### **Hunters Spend More for Licenses and Permits**

Hunters in 50 states spent a total of \$57,811,191.76 for hunting licenses, stamps, tags and permits required by state wildlife agencies to legally pursue and kill game during the 1959 fiscal year, according to information compiled by the U. S. Fish and Wildlife Service. Expenditures for 1959 exceeded those for 1958 by \$4,203,524.

There was, however, a slight decline (2.2%) in the number of hunters. A total of 11,924,033 hunters in 46 states purchased one or more licenses to hunt during 1959. Data from Colorado, Michigan, Minnesota and Wisconsin relative to the number of paid license holders were not available.

#### **Clapper Will Head NWF Conservation Education**

Louis S. Clapper has been named chief of the Division of Conservation Education as part of a National Wildlife Federation reorganization made effective Nov. 15, 1960, according to an announcement by Executive Director Thomas L. Kimball.

The former Conservation Division has been redesignated as the Division of Conservation Education. Clapper, as chief, assumes duties of the former conservation director, a post he has filled in an acting capacity since March 1.

Clapper, 44, joined the National Wildlife Federation staff on April 1, 1958, as an assistant conservation director and, among other duties, has served as editor

for several publications. A graduate of the University of Missouri School of Journalism and a veteran of four years naval service during World War II, he was employed by the Tennessee Game and Fish Commission for nine years as assistant director and chief of educational activities.

Kimball also announced a realignment of assignments for field personnel, saying affiliates in Delaware, Pennsylvania, Virginia, West Virginia, North Carolina, Maryland and the District of Columbia would be served by staff members from the Washington, D. C., office.

#### **Whooping Cranes Assembling in Texas**

The number of whooping cranes now gathered in their historic wintering marshes of coastal Texas indicates that the rare birds may have increased over last year, the Wildlife Management Institute reports. Thirty-one whoopers went north this spring and 32, including at least five young, have returned to the Aransas National Wildlife Refuge area.



#### **Range Conservation Stamp Announced**

The Post Office Department will issue the world's first range conservation commemorative postage stamp on Feb. 2 at Salt Lake City, Utah, the U. S. Department of Agriculture has announced.

This four-cent stamp, to be printed in three colors, will be released at the annual meeting of the American Society of Range Management under joint sponsorship with USDA's Forest Service and Soil Conservation Service, the Interior Department's Bureau of Land Management and Indian Service, and the Post Office Department.

Designer of the range stamp was Rudolph Wendelin, USDA artist who designed the forest conservation stamp. It

is the eighth in a conservation series which has included wildlife, forest, soil, and water conservation subjects.

The new stamp depicts the importance of grass land and livestock to the Nation's agriculture, and dramatizes the development of range conservation from the pioneer days of the open range to today's scientific range management techniques.

#### **New Chapter of Waltonians Receives Charter**

A new chapter of the Izaak Walton League of America, of Smithfield and Isle of Wight County, had its charter presented on October 25 by H. Burdge Catton, President of the Virginia State Division. The Suffolk-Nansemond County Chapter of the League was the new club's sponsor.

#### **"Hap" Harland Bags Third Deer With Bow and Arrow**

H. T. "Hap" Harland of Richmond bagged a 100-pound doe with bow and arrow, tipped with a Bear razorhead, at Fort Eustis in late October.

"Hap," a member of the Order of the Golden Feather, is a past president of both the Richmond Archers and the Virginia Bowhunters Association and one of the pioneer field archers in the state. This was his third deer with bow and arrow. He took the others in Georgia (Chattahoochee National Forest) and in Bath County, but it has been 12 years between deer this last time. It seems that bow-hunting is no sport for the impatient!

#### **Orr Named Pennsylvania Fish Commission I and E Chief**

Russell S. Orr, 48, a veteran outdoors editor for 30 years, was recently named Chief of Conservation Education and Public Relations for the Pennsylvania Fish Commission. Orr succeeds C. Robert Glover of Allentown as public relations chief.

Former executive director of the League of Maryland Sportsmen, Orr resigned as outdoors editor of the Sunday Patriot-News to join the state agency. Orr's appointment was said to be made by the State Fish Commission in order to develop improved public relations and liaison with the state's more than 650,000 licensed anglers.

#### **He Did It Again!**

Every season since 1936 A. G. Smith has shot a deer, and this year he did it again. Smith, of 1022 Orchard Avenue, Winchester, checked in an 80-pound doe the first day of the season this year.

### State Park Statistics Indicate Recreation Growth

A measure of the growing public demand for recreational opportunity is reflected in figures showing changes in programs for state parks, the Wildlife Management Institute reports. Some key statistics recently released for 1959 show:

Total Attendance	255,309,602	7.6% increase
Tent and Trailer Camping	13,733,510	5 % increase
Expenditures by State Park Agencies	\$ 88,268,419	20 % increase
Expenditures for Lands	\$ 14,834,071	96 % increase
Funds Available for Expenditure	\$139,340,618	3 % increase
Revenue from Operations	\$ 20,773,469	14 % increase
Personnel	16,690	virtually unchanged
Total Number of Areas	2,433	4 % increase
Total Acreage	5,680,909	5 % increase

### Conservation Films and Filmstrips Index Available

Teachers seeking reference materials should find "A Critical Index of Films and Filmstrips in Conservation" a helpful publication, the Wildlife Management Institute reports. Compiled and edited by the Audio-Visual Department of The Conservation Foundation, the index deals with renewable and non-renewable resources, and with new and to-be-developed resources.

Copies of the booklet may be obtained without charge from the Foundation, at 30 East 40th Street, New York 16, New York. The supply is limited.

### Geologic Map of the United States Reprinted

Geological Survey's "Geologic Map of the United States," compiled by G. W. Stose, assisted by O. A. Ljungstedt, first published in 1933, has been reprinted with important color changes that make it easier to read, the Department of the Interior has announced.

The 1960 edition is in four quarters (NE, SE, NW and SW), each sheet measuring 27 by 47 inches, and is available from the Geological Survey at \$1.50 per quarter or \$6.00 for the set. The scale is 1:2,500,000 (1 inch equals about 40 miles) and when joined together the four sheets make up a wall-size map. Alaska and Hawaii are not included. Orders for the map may be addressed to the Geological Survey, Washington 25, D. C.

### Lake Brittle Fishermen Average 1.8 Pounds of Fish Per Trip

Robert G. Martin, chief of the Commission's fish division, reported that, despite heavy fishing pressure this past summer, commission-owned Lake Brittle in Fauquier County had its best month in October 1960 when the average angler's catch reached 1.8 pounds of fish per trip.

Martin said that pressure of 100 fishing trips per acre on the 77-acre lake during the summer produced an average of one pound per trip. The October catch

increase was interpreted as evidence in support of the fertilization program being conducted there. Over 125 pounds of fish per acre were taken from Lake Brittle last year.



Edward T. Morris of Grottoes, Virginia, bagged this five-foot bobcat with a bow and arrow while up a tree waiting for a deer to come by in the North River area of the George Washington National Forest last October 15th, reports Game Warden T. J. Starrett. The skull measured 10½ inches in width.

### 1,402 to Receive Awards in Third Annual Virginia Salt Water Fishing Tourney

Some 1,402 anglers will receive colorful citations, mounted on plaques and preserved under a coating of clear plastic, for outstanding catches of 22 species in the third Annual Virginia Salt Water Fishing Tourney, Tournament Director Claude Rogers of Virginia Beach has announced.

Black drum led in the number of entries with a total of 256 weighing 50 pounds or better. The Kellam Distributing Co. Black Drum Trophy will be awarded to E. G. Hoachlander of Greencastle, Pa. for an 88-pound, five-ounce bruiser boated off Cape Charles.

An 85-pound cobia, the largest of 115 entered, was taken at Bluefish Rock and won the Mutual Life Insurance Co. of Virginia Cobia Trophy for Grady R.

Rogers of Hampton, Virginia. The Gwaltney Incorporated Dolphin Trophy for the heaviest dolphin will go to J. M. Messick of Poquoson, Virginia, who boated a 27-pounder while trolling off the Virginia Capes. Frank B. Kaye, Sr. of Arlington, Virginia, won the City of Virginia Beach Channel Bass Trophy for a 61-pound, three-ounce fish hooked off Cape Charles.

The A. H. G. Mears Trophy for the largest gray trout will go to Norman Justice of Wattsville, Virginia, for a seven-pound, 10-ounce fish hooked just off Chincoteague, Virginia. A six-pound sea bass entered by J. F. Strochecker of Baltimore, Maryland, won the Long Creek Marina Trophy for the heaviest of 100 entries.

A dozen of the newly-designed sportsmanship citations will be awarded to anglers who released marlin in the 3rd Annual Virginia Salt Water Fishing Tournament. To Robert Price of Salisbury, Maryland, goes The Norfolk Virginian-Pilot White Marlin Trophy for a 70-pound marlin, the largest of 26 entered.

Seven new species including shark, bluefin tuna, yellowfin tuna, tarpon, king mackerel, false albacore, and porgy were added to the list of the 15 original species for the 1960 Tournament. These new species are eligible for citations only. Of these seven new species, the porgy proved the most popular with 82 entries surpassing the three-pound minimum requirement. A four-pound, one-ounce specimen boated off Chincoteague, Virginia by G. H. Longenbaugh of Baltimore, Maryland while fishing with Capt. Everett Merritt took top honors in this division.

A 15-pound, eight-ounce bluefish set a new Virginia record for Charles Allen of Newport News, Virginia, who landed his prize while trolling off the Virginia Capes. Another record rating special mention is an 89-pound wahoo boated by Junius Pressey, Jr. of Hampton, Virginia, while fishing off the Virginia Capes with Capt. Garland Evans. Al Noyes of Portsmouth, Virginia, who captured first place in the shark division with a 335-pound monster, also boated a 286½-pound blue marlin, the first ever taken by an angler fishing out of a Virginia port.

After being virtually swamped with 500 flounders weighing more than five pounds in the 1959 tourney, the minimum weight for this species was raised from five to six pounds. A total of 160 exceeded the new 1960 minimum requirements, with a 12-pound, 15-ounce "doormat" taken at Kiptopeke by William Gingell, Sr. of Cheverly, Maryland, topping the list.

## Interior Apportions Fish and Game Restoration Funds to States

Federal Aid funds totaling \$21,425,402 have been apportioned to the States for their fish and game restoration programs for the year ending June 30, 1961, Secretary of the Interior Fred A. Seaton has announced. Of the total amount \$15,589,708 is for the restoration of game and \$5,835,694 is for the restoration of fish.

The current appropriations exceed the 1960 total by \$812,624 despite the fact that the 1960 total included the last of five annual "backlog" payments of \$2,693,494 each.

These funds are derived from Federal excise taxes collected from the manufacturers—an 11 percent tax on sporting guns and ammunition for the restoration of game (Pittman-Robertson Act, approved September 2, 1937) and a 10 percent tax on fishing rods, reels, creels and artificial lures, baits and flies (Dingell-Johnson Act, approved August 9, 1950). Both taxes apply on the manufacturer's price. The programs are administered by the Bureau of Sport Fisheries and Wildlife, Fish and Wildlife Service.

Federal Aid money is matched by State money on the basis of not to exceed \$3 Federal Aid to \$1 State funds, although according to the provisions of the Acts the States carry out all projects with their own funds, and are reimbursed for up to 75 percent of project costs.

When Federal Aid projects are approved by the Bureau, the State fish and game departments proceed to carry out the plans, spending their own funds. The States then submit reimbursement claims not to exceed 75 percent of the costs of the project, either periodically or at the completion of the work. All equipment, lands, and structures become the property of the States. All project workers are hired by the States and are State employees.

Apportionments to Virginia and neighboring States for fiscal year 1961 for both fish and wildlife projects are as follows:

	FISH	WILDLIFE
Delaware	\$ 54,550.00	\$ 73,510.00
Kentucky	85,178.33	219,021.76
Maryland	54,550.00	100,464.56
North Carolina	94,573.35	300,355.23
Ohio	152,717.08	410,886.05
Pennsylvania	122,515.72	557,541.26
South Carolina	62,263.83	149,244.78
Tennessee	144,156.64	290,460.42
Virginia	86,637.15	285,546.41
West Virginia	54,550.00	181,239.84



Danville Register & Bee Photo  
Robert McLenny, Jr. (left) vo-ag instructor at Spring Garden, Virginia, stands in a wildlife feed plot with his prize-winning student, Reid Yates. (See story on page 21, third column).

## Agricultural Poisons Account For Most Fish Kills

The United States Public Health Service has announced that first reports from 31 states indicate that agricultural pesticides and industrial wastes caused 70 percent of the 185 pollution-caused fish kills along more than 600 miles of streams and 5,000 acres of lakes during a continuing nation-wide Federal-State cooperative study from June to October 1960.

Fish kills are deaths of varying numbers of fish in a specific area within a short period of time. They usually occur because of the presence in a river of a foreign substance that destroys the ability of the fish to live.

This first nation-wide study of stream fish kills showed that agricultural poisons accounted for the largest number, or 73 out of the total 185 state reports. Industrial wastes were listed as the cause in 57, domestic sewage was listed 15 times (or eight percent) while other causes—pipeline breaks, shipping pollution, etc.,—numbered 17 fish kills, and unknown causes 28.

Approximately half of the reports received by the Public Health Service gave estimates of total fish kills, ranging, from 100 to 182,000 and averaging 6,100 fishes per kill.



Danville barber Bill Chavis frames his Virginia Wildlife covers and places them behind his stand at the barber shop.

## 1961-62 Federal Duck Stamp Design Selected

A mallard hen and eight ducklings in natural habitat will be the design on the 1961-62 Migratory Waterfowl Hunting stamp, the Department of the Interior has announced.

Edward A. Morris of Minneapolis, drew the winning design, a black and white wash drawing which the artist titled "Nine Mallards." Selection was made from nearly 100 drawings submitted to the 12th annual "duck stamp" contest conducted by the Bureau of Sport Fisheries and Wildlife, Fish and Wildlife Service. "Habitat Produces Ducks" was the theme of the contest.

A new duck stamp is issued each year by the Post Office Department which is in charge of the distribution and sale. It goes on sale on July 1 and expires the following June 30. All revenue from the sale of the stamps, other than funds needed to reimburse the Post Office Department for the actual cost of printing and distribution, is used in the selection and acquisition of migratory bird areas under the provision of the Migratory Bird Conservation Act.

## Aquatic Weed Spreads in Chesapeake Bay

Recreational and commercial interests are alarmed about the rapid spread of an introduced aquatic weed, Eurasian water milfoil, in the tidewater reaches of Chesapeake Bay, the Wildlife Management Institute reports.

A fragile plant with a feathery appearance, Eurasian water milfoil is used in aquaria. Its long, branching stems can reach the surface of water from depths to nine feet. The plant probably will continue to spread into other parts of the bay area and to similar waters elsewhere, according to the Chesapeake Biological Laboratory of the Maryland Department of Research and Education. Dense growths already have closed channels, and fishing, crabbing, swimming, and other tidewater activities have been affected. Plants used heavily by wintering waterfowl have been shaded out by profuse growths of the invasive exotic. In some areas it disrupts natural water movements and habitat favorable to mosquito breeding is formed.

Cutting offers temporary relief from the aquatic pest, but this control can spread the infestation. An experimental herbicide program shows some promise in the use of formulations of 2, 4-D in clay pellets that sink slowly and wedge among the submerged leaves.



### State Boating Law Administrators Meet in Chicago To Discuss Mutual Problems

Officials responsible for the administration and enforcement of state boating laws from 30 states met with representatives of the U. S. Coast Guard, the Council of State Governments, and other interested public and private agencies at the Sheraton Towers Hotel in Chicago on November 28 and 29, 1960, to make progress reports and iron out mutual problems connected with this new state responsibility.

On hand to present the Virginia situation were Game Commission Executive Director Chester Phelps, Staff Assistant Stuart P. Davey, and Information Officer M. Rupert Cutler.

Top-ranking Coast Guard officials opened the meeting with reports on their statistics administration, law enforcement, education and training, and boating safety publicity programs. The organization of the newly-formed North Central States Boat Law Administrators group was described, and a Treasury Department report on yacht documentation was given.

Representatives from the states present were allowed five minutes each to present summaries of their state's problems. Mr. Davey, in presenting Virginia's report, made a plea for a minimum of regulations, a maximum of reciprocity between states, and a clear definition of the term "principal use." ("Use" means "on the water, including mooring," it was explained.)

It was stressed that an accurate and complete compilation of accident report statistics is essential, and that these "hard facts" may turn up "misplaced emphasis" in existing or proposed boat legislation.

Ignorance of the law was termed the greatest cause of equipment and other boater deficiencies.

A proposed new system of outboard lighting was described by representatives of the Outboard Boating Club, and the outlawing of sirens on boats other than law enforcement craft was suggested by others. The licensing of all motor boat

operators was viewed as a long-range probability. The introduction of safe boat operation courses in schools has already begun in several states. A committee was named to design a standard buoy and sign system for inland waters under state control.



"... This tag says, 'We hope you enjoy your new boat; caution, soluble in water . . .'"

### Boating Fun for Small Fry

Getting children to go for a boat ride is no problem. Here are some games to play while afloat.

The games you play on auto trips, such as guessing games, singing, toys, and coloring books, will work equally well on a boat trip. Afloat, you'll have the added advantage of stretching room.

Fortunately, most of the sports that boaters enjoy are just as much fun for youngsters. Water skiing is easy for young and old alike; fishing, even with a stick and a bent pin, keeps kids busy for hours.

"Helping" to steer, looking for objects along the shore, and keeping track of the various kinds of boats sighted are a few other projects which are fun too.

### Is Sail Cheaper Than Power?

Although small sailboats don't usually have engines, their sails cost about as much as an engine would. Cruising sailboats usually have auxiliary engines, however, so this makes them more expensive than all-sail or all-power boats of comparable size and accommodations.

The smaller racing class sailboats are the most reasonably priced of all sailing craft, since they are built identically by

manufacturers who turn them out in quantity. They cost from \$300 to \$3,500, depending on size and finish.

### Nautical Terms Confusing?

With boats and boating becoming increasingly popular throughout the country, the uninitiated "landlubber" is often dazed by the terminology employed by his nautical friends. In sympathy with these non-sailors, the Evinrude Boating Foundation explains a few of the nautical terms commonly used.

Nautical references to speed and distance vary considerably from those used in land travel. When referring to a *knot* as it applies to progress of a vessel, it is a unit of speed equivalent to one nautical mile per hour. Thus, when a boat covers 15 nautical miles per hour, its speed is 15 knots. A nautical mile is 1.15 statute miles. The statute mile is the common measurement in highway travel. So when a boat is traveling at 15 knots it is proceeding at 17.25 statute miles per hour. A *fathom* is a measure of length containing six feet. It is used chiefly in measuring depth of water by soundings.

Among nautical terms which have a far different meaning from the common conception is *beam*. This refers to the greatest width of a boat, not something upon which a roof rests. *Cleats* are not projections on the bottom of a ball player's shoes, but hardware on a boat to which lines are fastened. *Draft* is the depth of a vessel in the water from the water line to its lowest point. A *log* is the record book of a ship's activities, and a *painter* is a line by which small boats are towed or made fast.

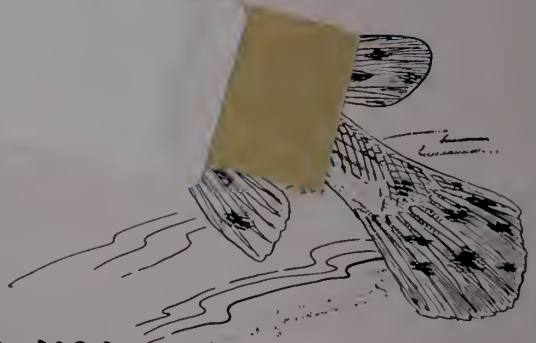
A *transom* is not an opening above the door in a hotel room, but on outboard boats it is the part from which the motor is hung. A *trick* in seaman's language is a period of duty at the helm, not a mischievous act. The nautical version of *trim* has no reference to a figure but means the way a boat floats in the water with reference to the horizontal plane.

Any wonder we landlubbers are confused?



THE LONGNOSE GAR PREFERS QUIET, WARM WATER. IT WILL ATTACK ALMOST ANYTHING THAT SWIMS. WHEN GAR BECOME ABUNDANT, GAMEFISH MAY SUFFER. IT IS PRACTICALLY USELESS AS FOOD.

# Predatory FISH



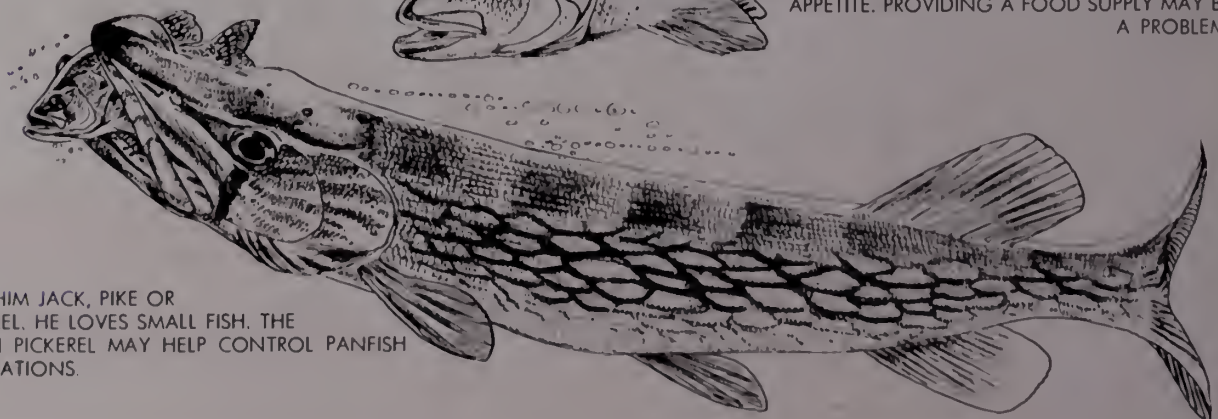
THE CAVERNOUS MOUTH AND BIG APPETITE OF THE LARGEMOUTH BASS MAKE HIM A USEFUL PREDATOR. HE HELPS "BALANCE" FARM PONDS.



A GOOD SET OF SHARP TEETH EQUIP THE WALLEYE FOR HIS JOB OF PREDATOR. HE DOES IT WELL BY CONVERTING FORAGE FISH INTO FINE TASTING WALLEYE MEAT.



FIRMLY ESTABLISHED IN KERR RESERVOIR, THE STRIPED BASS HAS A TREMENDOUS APPETITE. PROVIDING A FOOD SUPPLY MAY BE A PROBLEM.



CALL HIM JACK, PIKE OR PICKEREL. HE LOVES SMALL FISH. THE CHAIN PICKEREL MAY HELP CONTROL PANFISH POPULATIONS.